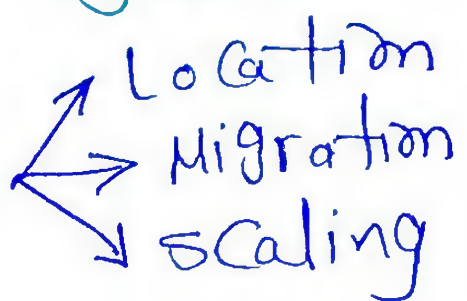


slide 3
Distributed File System
- DFS -

- what are file system Management task ?
 - Naming and Locating a file.
 - Security and Protection.
 - Accessing file (read-write-delete----).

- Meaning of Distributed File system :
a file system with distributed storage on multiple machines.

- Distributed file system Requirements :

1 - transparency 

2 - Replication

3 - Fault tolerance

4 - security

5 - efficiency (speed)

Access Control List (File Permissions)

Capability List (user Permissions)

- What are Models of File Service ?

File Service

upload/download Model (Cached System)

- client download the file and make changes on it then upload it to the server back (may cache it for future request if it's repeatedly accessed).

advantage: 1- Reduce Network traffic
2- fast by using cache

disadvantage:

1- client storage may be small

2- inconsistency problem between cache and the server.

Remote Access Model (remote system)

- client execute operation on the server

advantage:

1- better for small storage of users

2- No consistency problem

disadvantage:

1- overhead network traffic

2- take time for every request of file.

- Comparison between Caching on disk and on Main Memory :

disk advantage : More Reliable since if ~~canst~~ something wrong happened to Machine and it's Powered off, we don't need to fetch data again from server, we get it from disk.

Main Memory advantage : quickly Accessing data so the performance is better.

- two Approach of Consistency :

- client-initiated : the client is responsible for check the two file one he has and the other on the server is the same.

- Server-initiated : the server is responsible for check

- what are cache-update Policies :

1- write-through: ~~any when client make~~
~~the file process on the server~~
the client send any changes
he made on the file to the
server immediately.

2- Delayed-write: the client make changes on his
cache and later send it to the
server, so if his machine crashes
we lose the data.

3- Variation 1: for every time period, send changes
to the server

4- Variation 2: send file changes to the server
when you close the file.

- Mention two file services states ?

stateless

No client-specific information kept on the server after user ends the session

stateful

the server has information about the client between sessions since the client has unique identifier

Failure Recovery

doesn't know if a failure happened and begin a new session when you request.

Resume your old session by restoring old state by your identifier.